

Work Order ID 111238

Thursday, January 09, 2014 11:30:26 AM

111238

Page 1

Item ID: PB67-43001-205

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Outer Tube

Start Date: 1/9/2014 Start Qty: 5.00

5

Cust Item ID:

Required Date: 1/24/2014 Req'd Qty: 5.00

5

Customer:

Reference:

Approvals: Process Plan: ME Date: 14-01-09 Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
B67-43001	C

100 0.00

1100

BAND SAW

Bandsaw

Memo

0.00

Jeaspa Bandsaw

1- cut to length as per dwg
2-cut a angle on one end of tube as per dwg
3- deburr

14-01-19 (x5)

110

0.00

1110

CONVENTIONAL MILLING MACHINE

Mill Conv

Memo

0.00

Conventional Milling Machine

1- drill holes and mill slot as per dwg PB67-43001 USE DT8792
2- deburr

14-01-19 (x5)

120

QC5- Inspect part completeness to step on W/O

0.00

1120

QC

Memo

0.00

Quality Control

DAS
27

9-89

14/1/22

S

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: AntDate: 14/01/29QA Closed: 9/1Date: 14/1/29/

Work Order: <u>111238</u>				DISPOSITION		AGAINST DEPARTMENT/PROCESS									
Part No. <u>PB67-43001-205</u>				Rework ☐		Skid-tube ☐		Crosstube ☐		Water Jet ☐		Engineering ☐			
NCR No. <u>14-3466</u>				Scrap ☒		Machining ☒		Small Fab ☐		Prod. Eng. Coord. ☐		Quality ☐			
				Use-as-is ☐		Thermoforming ☐		Finishing ☐		Rec/Store/Packaging ☐		Other ☐			
				Work Order Update ☐		Large Fab ☐		Composite ☐		Supplier ☐					
Root Cause		Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector					
Doc/Data		<u>14-01-29</u>	<u>110</u>	<u>x 1</u>	<u>.125" holes nearest .750" slot off center by .020"</u>	<u>14-01-20</u>	<u>STRESS CONCENTRATION. SCRAP + REPLACE</u>	<u>14-01-20</u>	<u>DAS 27 9/89</u>	<u>14/1/22</u>					
Equip/Tooling															
Operator															
Material															
Setup															
Other															
Process															
Supplier															
Training															
Unapproved															
FAULT CATEGORY															
Landing Gear				General											
☐ Bending				☐ Bend				☐ Grain				☐ Ovalized			
☐ Centre Not Concentric to O/S				☐ BOM/Route				☐ Hardware				☐ Over/Under tolerance			
☐ Cracks				☐ Broken/Damaged				☐ Inspection Incomplete				☐ Part Incorrect			
☐ Crushed/Crimped				☐ Burrs				☐ Instructions Incomplete/Unclear				☐ Part Lost/Missing			
☐ Cuffs				☐ Contamination				☐ Maintenance				☐ Part Moved			
☐ Heat Treat				☐ Countersink				☐ Mislabeled				☐ Positioned Wrong			
☐ Inspection Strip in Tube				☐ Cut Too Short				☐ Misread				☐ Power Loss/Surge			
☐ Ripples in Bend				☐ Drill Holes				☐ Offset				☐ Pressure/Forced			
☐ Torque Waves in Extrusion				☐ Drawing				☐ Out of Calibration				☐ Temperature/Cure			
☐ Turning Sequence				☐ Finish				☐ Out of Sequence				☐ Weld			
☐ Wave/Twist in Tube				☐ Folio				☐ Outside Dimensions				☐ Wrong Stock Pulled			
												☐ Other			
<u>off center</u>															

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Page 2

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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* Large Fab Large Fab	Weld per dwg A/R Aluminum rod Batch: <u>125071</u> Large Fab Memo 1-Weld end cap as per dwg PB67-43001 2-grind end cap flush	0.00 0.00	CX 14-01-23			5*			
140 *140* QC Quality Control	QC10- Inspect visual per QSI004- ground welds Memo	0.00 0.00					⑤ 14-01-24		DAS 9 9-89
150 *150* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00					⑤ 14-01-24		DAS 9 9-89

Work Order ID 111238

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Page 3

Item ID: PB67-43001-205

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N900040100

Setup Start ***NS1***

Revision ID:

Item Name: Outer Tube

Stop ***NS2***

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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	Identify as per dwg & Stock Location: _____	0.00							
160									
Packaging	Memo	0.00							
Packaging									
170	QC21- Final Inspection - Work Order Release	0.00							
170									
QC	Memo	0.00							
Quality Control									

DAS
32
9-89

14/01/24

(5)

MLJ 14-01-27

(A) 14-01-24

Picklist Print

Thursday, January 09, 2014 11:30:26 AM

Page 1

Work Order ID: 111238

Parent Item: PB67-43001-205

Parent Item Name: Outer Tube

Start Date: 1/9/2014

Required Date: 1/24/2014

Start Qty: 5.00

Required Qty: 5.00

Comments: IPP Rev:A 08-07-24 new issue DD verified by:ec

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6T1.750W.065 6061T6 RDTUBE 1.750 X 0.65W		Purchased	No			100	f	185.8300	3.615	20	18.95	1/14/2014	

Location	Loc Qty	Loc Code
MAT016	185.83	
110885	15.83 X	
122146	7 X	
123485	19	
M126139	72 X	
M126183	72	

3.79
7.58
3.8
7.58

✓ PB67-43001-199
Outer Tube End Cap

Manufactured No

130 Each 13.0000

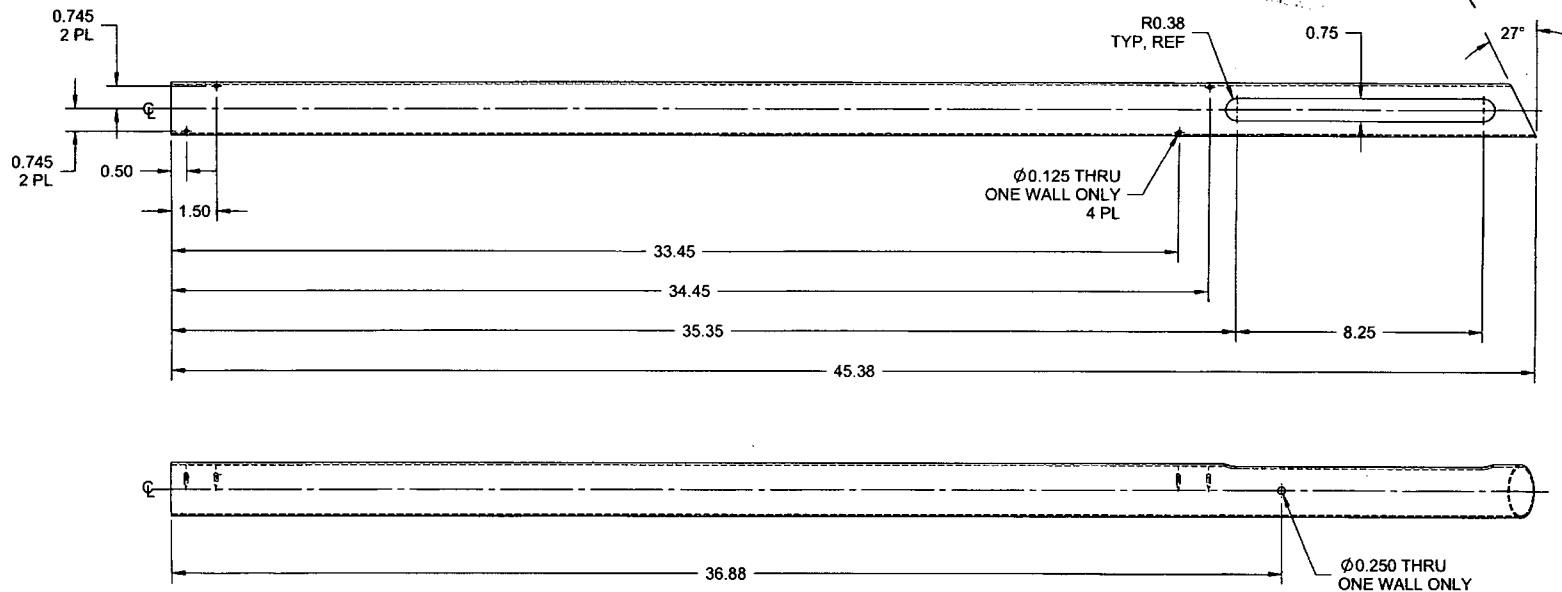
1 5

1/14/2014

Location	Loc Qty	Loc Code
Mezz2	13	
44991	1	
99985	12	

1
4

[Handwritten signature]



B67-43001-205 OUTER TUBE

RELEASED
2009-09-24

NOTES:

- 1) MATERIAL: 6061-T6 OR 6061-T62 ALUMINUM TUBING
PER WW-T-700/6 OR AMS4080 OR AMS 4082 OR
AMS-QQ-A-200/8 OR AMS-QQ-A-225/8
REF. DART SPEC. M6061T6T1.750W.065
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 1.46 lbs

C	REDRAWN PREMIER AVIATION DRAWING IAW DART QSI 018 AND QSI 043. FOR PREVIOUS REVISIONS, REFER TO SHEET 16 OF PREMIER AVIATION DRAWING No. B67-43001. REASON: SEE PAR#09-011.		MB	09.02.27
REV.	DESCRIPTION		BY	DATE
DESIGN	RW	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. B67-43001-205 TITLE OUTER TUBE COPYRIGHT © 1995 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	REV. C	
DRAWN			SHEET 1 OF 1	
CHECKED			SCALE	
MFG. APPR.			NTS	
APPROVED				
DE APPR.	N/A			
DATE	09.02.27			

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐															
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐															
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐															
Large Fab ☐	Composite ☐	Supplier ☐																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

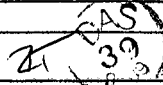
FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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DART AEROSPACE LTD		Work Order:	111238
Description: outer tube		Part Number:	PB67-43001-205
Inspection Dwg: PB67-43001-205		Rev: C	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
745	+/- .010	745	✓		conu mill	
745	+/- .010	745	✓		"	
R 0.38	+/- .030	0.380	✓		view	PT-4
.75	+/- .030	.766	✓		"	
27°	+/- .5°	27°	✓			
.50	+/- .030	.500	✓		Type	PT-10
1.50	+/- .030	1.500	✓		"	
33.45	+/- .030	33.440	✓		"	
34.45	+/- .070	34.440	✓		"	
35.35	+/- .030	35.35	✓		"	
45.38	+/- .030	45.375	✓		"	
8.25	+/- .030	8.250	✓		"	
36.88	+/- .030	36.875	✓		"	
Ø .125	+ .004 / - .001	.129			view	PT-4
Ø .250	+ .005 / - .001	.254			"	

Measured by: 	Audited by: DAS	Preliminary Approval:
Date: 14-01-19	Date: 14-7-22	Date:

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

10.04.15